



Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

## MEMORANDUM

DATE: December 12, 2018

TO: Dan Duchniak

FROM: Kelly Zylstra

RE: Wolf Road Well No. 10 Emergency Well Pumping Equipment Repairs/Replacement

The 700Hp submersible motor in Wolf Road Well No. 10 experienced electrical issues on Saturday, November 24<sup>th</sup> and faulted into a shut down. We were able to restart the pump, however, it faulted again on Saturday, December 1<sup>st</sup>. On Monday the 3<sup>rd</sup>, we called in our consultant to run additional testing on the motor; based on the results of those tests the catastrophic failure of the motor is imminent. Following the testing on the 3<sup>rd</sup>, we were able to restart the pump but only by changing the current pump drive settings so that it would not fault and could be forced to run. Since that time, we have modified our normal pumping operations of other wells in an effort to keep Well No. 10 running, as the inrush of electrical current on the next start-up would likely be its point of catastrophic failure.

Waukesha Well No. 10 is our largest deep well with treatment, supplying radium compliant water in the capacity of over 3.8mgd to the City.

The last catastrophic failure of Well No. 10 occurred in November of 2016.

We need to pull the existing pump and motor, immediately install the spare pump and spare 350Hp motor that is on-site, and start-up this temporary well pumping equipment. This work is estimated to take three and a half to four weeks once a contractor is on-site.

The 700Hp pump and motor, once removed, will be inspected and it will then be determined whether rebuilding that motor, or replacing it with a new one, is in the best interest of the utility. Once the repaired, or replaced, 700Hp pump is available, the 350Hp temporary pump and motor will be removed from the well, sent for inspection and returned to its spare status to remain compliant with our DOJ stipulation order, while the 700Hp pump and motor are reinstalled in the well. This work is estimated to take an additional three and a half to four weeks once the contractor is on site. The duration of the motor inspection/repair or replacement is not known but based on 2016 could take up to six months.

The costs of this work will be incurred in 2019, and are estimated to be up to \$325,000.

Given the recent water demands in Winter and Spring, it may be possible to remain compliant with our other wells, however, should we begin to experience higher demands, we will start by demanding Well 7, which has been testing below the 5pCu/L combined radium limit for the last few quarters. Once demands reach 6.1mgd, we will need to demand a non-compliant well.

**Recommended Motion:** The Waukesha Water Utility Commission hereby declares that an emergency

situation exists, as described in Section 62.15(1)(b) of the Wisconsin Statutes, and directs the General Manager to negotiate a contract with Municipal Well & Pump to remove the existing Wolf Road Well No. 10 pumping equipment, install the spare pumping equipment and then reinstall a repaired or replacement 700Hp pumping equipment to remain compliant with the DOJ consent order for a price not to exceed \$325,000.